

Possibilities for Improvement in MW Forward Calculation

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AIRS Science Team Meeting

Nov.30-Dec.2, 2004

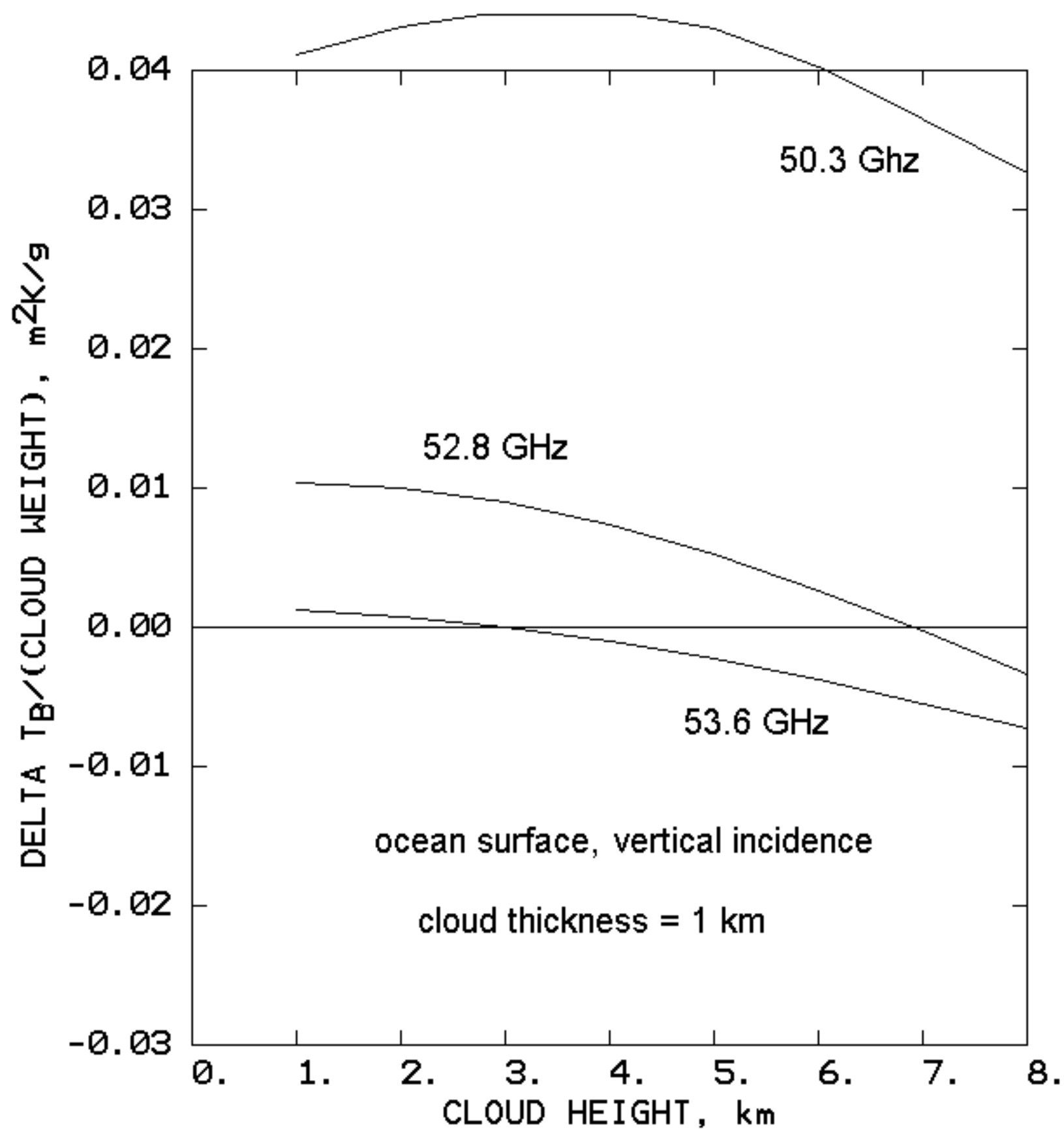


REMOTE SENSING AND ESTIMATION GROUP
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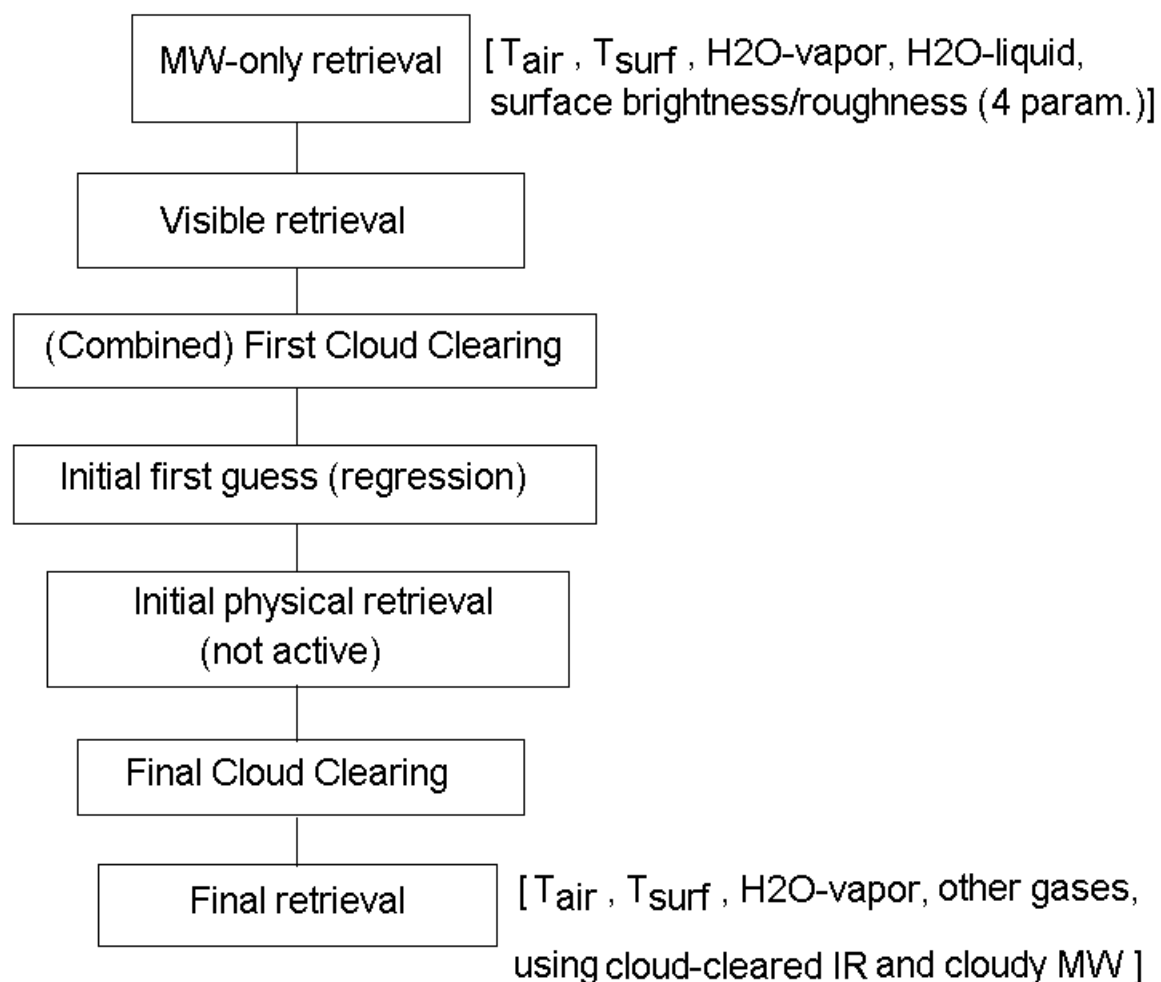


- MW surface emissivity/roughness is now estimated with 3 degrees of freedom (3 of 4 possible variables) in the MW-only retrieval, but with 1 degree of freedom in the final retrieval.
- Cloud liquid water is estimated by the MW-only retrieval, then used without modification in the final retrieval. Without HSB, the vertical distribution is wrong.
- For v.5 - add estimation of MW emissivity/roughness spectrum and cloud liquid water profile to the final retrieval.

The effect of a cloud on T_B depends on its altitude



Level 2 PGE



First Cloud Clearing

first guess of ε_{IR}

MW / strato IR retrieval

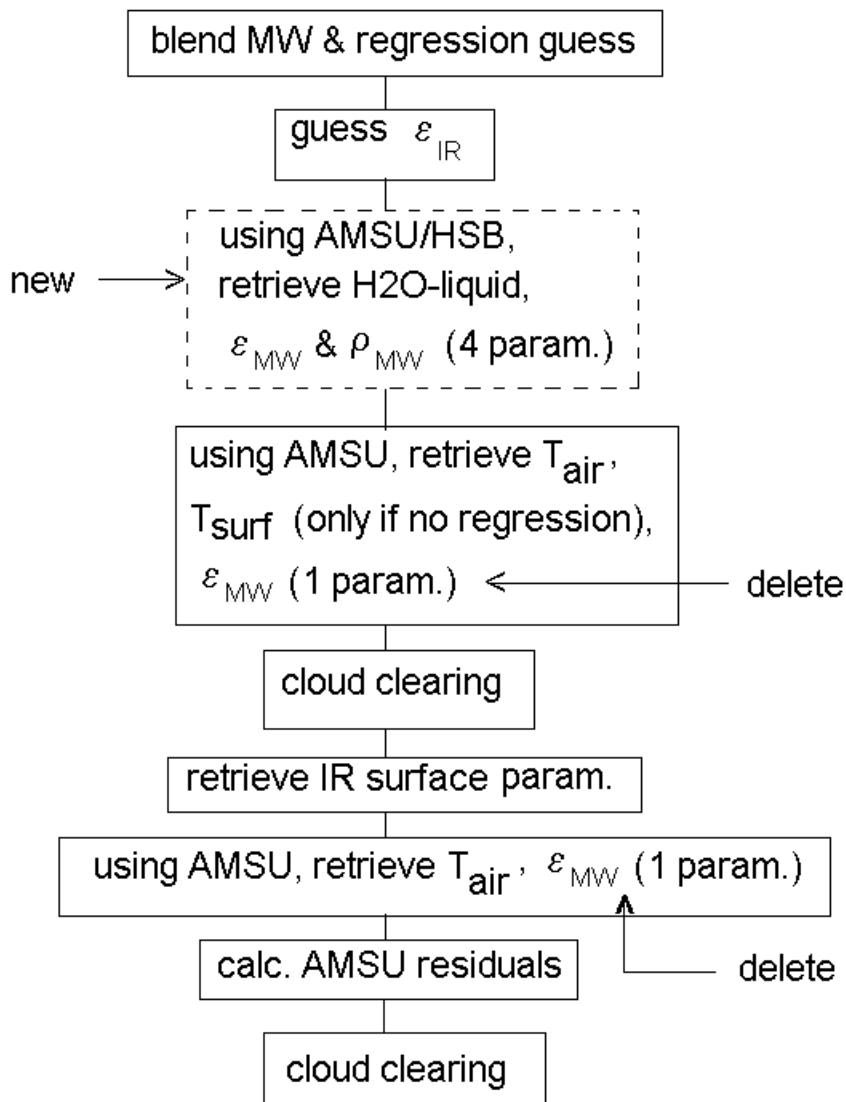
retrieve T air , T surf (optional),
 ε_{MW} (1 param.)

calculate AMSU residuals

retrieve H2O-vapor,
IR surface param (optional)

cloud clearing

Final Cloud Clearing



Final Retrieval

